

# HEAD RUSH TECHNOLOGIES

# GORILLA ROPE™

Operator Manual

Part #11165-02

## READ BEFORE INSTALLATION & OPERATION

Failure by the installer or operator to heed any and all instructions, warnings and cautions for the correct installation, operation, care and maintenance of Gorilla Rope may result in serious injury or death. Refer to the zipSTOP Installation and Operations manual when using the Gorilla Rope in conjunction with the zipSTOP zip line brake.

Gorilla Rope and all associated equipment are designed and specified for use in the recreational zip line industry as a redirection rope connecting the zipSTOP Brake Unit and the Brake Trolley. Use of Gorilla Rope for other purposes is permitted as long as any and all applicable specifications and regulations are met.

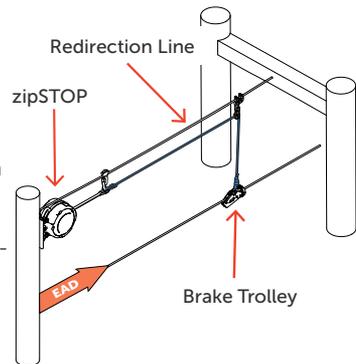
Use of the Gorilla Rope as a redirection line with any zipSTOP or Brake Unit without an Emergency Arrest Device (EAD) is prohibited.

### Health & Safety

Owners and operators must abide by all standards, international, federal, state and provincial laws, and any specific health and safety regulations pertaining to the installation and use of this product.

## DESCRIPTION

Gorilla Rope is designed specifically for use with Head Rush Technology's zipSTOP Brake Unit, Precision Pulley and Brake Trolley. Gorilla Rope is intended to be used as the redirection line between the zipSTOP Brake Unit and the Brake Trolley (see image to the right). Use of Gorilla Rope for other purposes is permitted as long as any and all applicable specifications and regulations are met.



## SPECIFICATIONS

Note that Permanent Extension will occur at the beginning of the ropes life. The redirection line may have to be reviewed and reset after the first uses of the line.

DIAMETER	6mm
STATIC STRENGTH (MINIMUM)	18.7 kN (3,350 lbs)
ELONGATION	@ 10% of break load: 0.51% @ 20% of break load: 0.89% @ break load: 3.6%
MAXIMUM OPERATING TEMPERATURES	80°C (176°F) - permanent strength loss will occur if exposed to greater temperatures.
WEIGHT	2.4 kg/100 m (1.5 lbs/100 ft)
MATERIAL OF CORE	Dyneema® SK78
MATERIAL OF SHEATH	High Tenacity Polyester

## System Components

All components of the zip line braking system must be compatible with Gorilla Rope. Ensure all components comply with their user manuals and meet necessary standards by the authority having jurisdiction. All components used must not show signs of damage or excessive wear.

Gorilla Rope must be used with the correct pulleys. Pulleys must meet the 15kN minimum strength requirement of EN 12278 and have a specified rope diameter range that includes 6mm.

## Termination

Rope ends will become frayed once cut. Please refer to the following instructions for the best method of cutting the Gorilla Rope:

1. Decide where the Gorilla Rope needs to be cut.
2. Wrap tape (climbing, electrical, etc) around the pre-determined cutting point. The tape should wrap around at least 5cm (2in) of the rope.
3. Pull the Gorilla Rope tight and use a razor blade to cut the Gorilla Rope in a smooth sawing motion in the middle of the taped section.
4. Either add tape to the cut ends to prevent fraying or use a rope whipping product to seal the ends.

*\* Do not use a lighter or heat source to melt the ends. \**

A figure eight knot with a double fishermans termination is the recommended termination knot for the Gorilla Rope. Spliced Eye termination is an acceptable practice. Once terminated, the tail of the rope should be no less than 7cm (2.75 inches). Do not splice or tie two ropes together to use as a single redirection line.

## Cleaning Gorilla Rope

1. Place Gorilla Rope in a large bucket or bathtub. Never put Gorilla Rope in a washing machine.
2. Fill the bucket with warm water and mild soap. Do not use detergent.
3. Agitate the rope inside the bucket to release any dirt and grime.
4. Drain the water and repeat steps 1-3 until the water runs clean.
5. Hang the Gorilla Rope uncoiled in a clean, cool and dry location away from direct sunlight until dry. Do not use heat to dry Gorilla Rope.

## Sun, Water, Debris & Chemicals

- **Water Exposure:** Salt and fresh water will have minimal effects on the strength and abrasion resistance of the Gorilla Rope. The rope is hydrophobic which makes it an excellent choice in wet environments.
- **Sun Exposure:** Gorilla rope has high UV resistance but over time will begin to deteriorate if exposed to direct sun. UV damage is evidenced by discoloration of the sheath. The sheath will protect the core from UV damage. However, Gorilla Rope should be replaced when discolored.

## Sharp Edges

Ensure that Gorilla Rope does not rub against or come into contact with sharp edges or rough surfaces. Inspect all pulleys, connectors, etc for wear.

## Debris

As with any rope, avoid getting Gorilla Rope dirty. Debris introduced into the rope fibers may cause damage/abrasion over time.

## Storage

Store Gorilla Rope in a cool, dry, well ventilated location out of direct sunlight. Retire Gorilla Rope after 5 years regardless of use.

# **INSPECTION PROCEDURE**

Upon receiving Gorilla Rope and before each day of use, the entire length must be checked for signs of wear. It is more difficult to inspect wet rope. If the rope is wet, it is best to let the rope dry before inspecting. A qualified inspector should run the length of the rope through their hands and inspect for the following:

## **FRAYED ENDS**



*Frayed ends must be properly terminated*

## **ABRASIONS, NICKS, OR CUTS IN ROPE**



*Fuzzy Rope is OK. Be sure to continue to inspect rope daily*



*Nicked or cut rope must be retired*

## **SIGNS OF CHEMICAL WEAR/ODOR OR BURNS/HIGH HEAT**



*Rope must be retired if there are signs of chemical damage*



*Ropes with burns or signs of high heat exposure must be retired*

## **DISCOLORATION**



*Discoloration from Gorilla Rope running through pulleys and standard use is to be expected and is OK. Be sure to continue to inspect rope daily.*

## **COMPROMISED CORE**

Feel for possible core damage. If there is a "soft" spot in the rope, an inconsistency in the rope diameter, or excessive bunching of the sheath, the core has most likely been compromised. In order to check, make a tight loop in the rope, if the rope folds as seen below, it must be retired.



*When looped, the rope must hold a circular shape*



*If the rope kinks, the core has been compromised & must be retired*

If any of the above are found or you feel that there may be a questionable issue with the rope, remove from use immediately. Please keep a record of all Gorilla Rope inspections.

## Retiring Gorilla Rope

Gorilla Rope must be retired if:

- Gorilla Rope has been subject to excessive impact loads.
- Gorilla Rope is greater than 5 years old (from manufacturing date), regardless of use.
- Gorilla Rope has been exposed to flame, high heat or excessive abrasion.
- Gorilla Rope has been exposed to any chemicals including but not limited to, strong acids, alkalis, detergents, paint, or any sort of coating.
- Gorilla Rope has a compromised core.
- To retire Gorilla Rope, cut into sections to ensure that it will not be reused

## MANUFACTURER'S DETAILS

### Address

Head Rush Technologies  
1835 38th Street, Suite C  
Boulder, CO 80301  
USA

### Contact Details

+1-720-565-6885  
[www.headrushtech.com](http://www.headrushtech.com)  
[info@headrushtech.com](mailto:info@headrushtech.com)



**Head Rush Technologies** Gorilla Rope Manual

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**U.S. Patents** 8,490,751; 8,851,235; 9,016,435; 8,851,235 and D654,412 & corresponding patents/ applications in the USA and in other countries worldwide.

+1-720-565-6885

[headrushtech.com](http://headrushtech.com)

[info@headrushtech.com](mailto:info@headrushtech.com)

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